

## REMARKS

Claims 1-8 are pending in the application. Claims 1, 3, 6 and 7 have been amended. New claim 9 has been added. Reexamination and reconsideration are respectfully requested.

Initially, Applicants have inserted labels into drawing Figures 1, 3, 4 and 5 to address the Examiner's objections per the attached. Additionally, several informalities have been corrected in the specification. And, the Abstract has been amended per the Examiner's request. Finally, Applicants have amended the title of the invention to be more descriptive.

Applicants' gratefully acknowledge the indicated allowability of claims 3, 4, 6 and 7. Accordingly, Applicants have rewritten claims 3, 6 and 7 to be in independent form and thus allowable. Claim 4 depends from claim 3 and therefore should now also be allowable.

In the Office Action, claims 1, 2, 5 and 8 were rejected as being anticipated by SUZUKI et al. (US 5,513,718). Applicants respectfully traverse this rejection.

Applicants' claim 1 recites power supply equipment for a motor vehicle comprising a motor generator, an inverter, a battery and a capacitor of an electrical double layer. The capacitor is directly connected to a DC side of the inverter and the battery is connected in parallel with the capacitor via first switching means. Applicants have clarified claim 1 to note that the first switching means is for controlling an electrical connection between the battery and the capacitor.

By contrast, Suzuki discloses in Figures 4, 8 and 9 a battery 22 connected in parallel with a capacitor 20. However, the battery and the capacitor are



connected via either a step-up/step-down converter 21 (Figure 4) or a bi-directional DC-to-DC converter 19 (Figs. 8 and 9). The use of a step-up/step-down converter 21 or bi-directional DC-to-DC converter 19 does not meet the limitation of Applicants' claimed first switching means through which the battery is connected in parallel with the capacitor. Rather, the bi-directional DC-to-DC converter 19 and step-up/step-down converter 21 control merely the direction of the electric current flowing between the battery and the capacitor to increase or decrease the voltage. They do not, however, operate as Applicants' first switching means that controls an electrical connection between the battery and the capacitor. To the extent the bi-directional DC-to-DC converter 19 and step-up/step-down converter 21 include some switching componentry, it merely is utilized to control the direction of energy transfer and not to turn on or off a connection between the battery and the capacitor as in Applicants' invention.

In order to clarify this fundamental difference between Applicants' first switching means and the bi-directional DC-to-DC converter 19 of SUZUKI, Applicants have amended claim 1 to recite that the first switching means is for controlling an electrical connection between the battery and the capacitor. Clearly, Applicants' switching means for merely turning on or off an electrical connection in the present invention is vastly different from a step-up/step-down converter or bi-directional DC-to-DC converter and, has a vastly simpler construction and decreased expense.


In view of the foregoing, Applicants submit claim 1 is patentable over SUZUKI.

Regarding claim 2, Applicants recite a control means for turning off the first switching means in the start-up of an engine to separate the battery from the capacitor and for turning on the first switching means after the start-up of the engine to connect the battery to the capacitor. By contrast, the inverter control circuit 5 in SUZUKI does not control either the step-up/step-down converter 21 or bi-directional DC-to-DC converter 19, but rather just the inverter circuit 4. Applicants' control means (for example 10) turns off the first switching means (for example 11) as can be seen clearly from the signal lines shown in the figures.

In SUZUKI, there is some description of a starting mode and a deceleration mode. However, SUZUKI does not disclose or suggest that a connection between the battery and the capacitor is turned off at start-up of the engine and turned-on after the start-up of the engine as recited in Applicants' claim 2. Hence, Applicants submit claim 2 is separately patentable over SUZUKI.

Regarding claim 5, this claim depends from claim 1 which is submitted to be patentable for the reasons set forth above. Hence, claim 5 should also be patentable.

Regarding claim 8, Applicants claim power supply equipment for a motor vehicle wherein the battery has a plurality of different (higher and lower) voltage terminals. For example, battery 6a shown in Figure 5 has higher and lower voltage terminals, which are connected with the capacitor 5 through the first switching means 17 and the second switching means 18, respectively. Applicants' recitation of a plurality of different voltage terminals therefore



clearly means terminals such as a higher voltage level terminal and a lower voltage level terminal and does not encompass a ground or negative terminal. No where is this claimed structure disclosed or suggested in SUZUKI. Accordingly, Applicants submit claim 8 is separately patentable over SUZUKI.

Lastly, Applicants have added new independent claim 9 directed toward power supply equipment for a motor vehicle comprising a motor generator, an inverter, a battery and a capacitor of an electrical double layer. The capacitor is directly connected to a DC side of the inverter and the battery is connected in parallel with the capacitor via an electrical switch. The electrical switch electrically connects and disconnects the battery from the capacitor.

In view of the foregoing, Applicants submit claims 1-9 are now in condition for allowance. An early notice to that effect is solicited.

Summarizing, Applicants have made an important contribution to the art to which the present subject matter pertains, for which no counterpart is shown in any of the art or combination of same. The invention is fully set forth and carefully delimited in all claims in this case. Under the patent statute, Applicants should not be deprived of the protection to which they are entitled for this contribution. Accordingly, it is respectfully requested that favorable reconsideration and an early notice of allowance be provided for all remaining claims.


If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

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If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #381AS/50354).

Respectfully submitted,

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